

Avec l'ami Denequin, j'ai quitté Alger
par une après-midi d'hiver ensoleillé et
mon bagage comme envolé par-dessus l'Atlas,
vers la ville de M'zab, au sud, dans
le troisième desert.



Vol Au-Dessus de Ghardaia

1931, Le Corbusier, Alex Gerber, "L'Algérie de Le Corbusier, Les Voyages de 1931," (PhD diss., EPFL, 1993)

the rise of phaethon. an aerial travelogue to north-africa in the inter-war period

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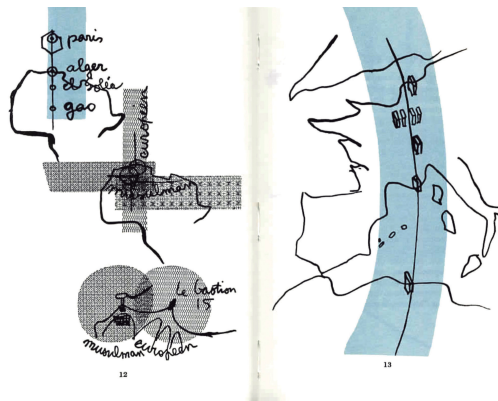
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Despite being the traditional lens through which to understand architecture, modern history has eclipsed the bird's eye by the car and the boat as architecture's favourite machine. However, aerial photography supposed a tour de force in the technologies of Modernity, bringing legibility and empowerment into the ungraspable nineteenth-century metropolis. A vision for which Le Corbusier argued in his Aircraft. Paradoxically, the revelatory journey for Le Corbusier was not over the metropolis but over the desert. However, other author's experiences of overflying the desert challenged the scientific logic associated to god-eyed airplane view. This paper explores the creative process set in motion by the shooting of the desert from an airplane, showing that high-technological means did not produce a direct process of modernisation but a more complex one in which the relations between positive science, technology, colonisation and the uncontrollable landscape were in an unstable equilibrium that reversed the conventions of aerial photography.

keywords Aerial photography, Aircraft, Cartography, Desert, Le Corbusier, Malraux, North Africa, Sheba, Zerzura

a bird-eyed le corbusier

Ever since Alberti's winged-eye, Architecture has shown fascination with the bird-view, a discourse re-enacted in the inter-war period by Le Corbusier's *Aircraft* (1935). A collection of captions portraying airplanes, it argues for a 'New Vision' with which the machine has endowed us. Reflecting on the implications of literal aerial contemplation, Le Corbusier is clear in the function of the book: addressing the amateur of the technologies, it will open the "eyes that do not see". However, preceding the photographs, that same eyes of the reader are first lead by an already experienced air-traveller. In the introduction –modestly titled 'A Frontispiece to Pictures of the Epic of the Air'–, Le Corbusier narrates his heroic story of discoveries through aerial view in a text in which he becomes a modern Icarus¹. The new technology reenacted the origins of the Architect in the winged-view Icarus inherited from his father –the conception of the labyrinth as full-picture². In fact, Le Corbusier's alter ego draws him to conclude the implications of aerial view as a means of dispelling the angst produced by the inescapable nineteenth-century metropolis. The aerial vista, therefore, endowed us with a critical tool: "the airplane indicts"³, with which Le Corbusier summarises his text. In Le Corbusier, seeing contemporary city from above brings legibility, criticality and indictment, opening for the possibility of a modern city.



f1_Paris-El Golea-Gao in Poésie Sur Alger

Le Corbusier, (Paris: Falaize, 1942)

As Adnan Morshed has argued, for Le Corbusier aerial view opens up to "the experience of planning (...) as a universal act of rectifying both spatial and social pathologies"⁴ that can be perceived in the construction of the "méri dien Paris –El Goléa– Gao" (**f1**) for the Obus Plan (1932). In the Plan we can grasp a new understanding of design in which, through the technology of the aircraft, the aerial view seemed to internalize every limit, producing the disappearance of any 'outside' escaping the Global infrastructure⁵. However, if Le Corbusier's argument is to be read as interiorizing, we have to bear in mind that only 20 of the 124 captions in *Aircraft* could be defined as 'aerial' i.e. taken from the cockpit. It is not until the last lines of the frontispiece in which the interior of the new machine plays a key role in contemplating an exterior, however it is in there that Le Corbusier finds his great illumination. "With my friend Durafour, I left Algiers (...) towards the towns of the M'Zab in the third desert to the south". His

the rise of phaethon. an aerial travelogue to north-africa in the inter-war period

gaze there focuses in the outside –not only of the airplane, but he actually escapes to the outside of the city, the desert. “Durafour, (...) pointed out two specks on the horizon, “There are the cities! (...) he stooped several times upon one of the towns, coming round in a spiral (...) Thus I was able to discover the principle of the towns of the M’Zab. The airplane had revealed everything to us”. Le Corbusier gets immersed on beholding the architecture of the desert. And, following the descent, the indicting gaze; however, this time its object is not what is seen but its opposite, the desert town operates as mirror of the metropolis: “such is the gulf which separates natural creations of the desert from the cruel and inhuman creations of white civilization”⁶. Farther than questioning what exactly he saw in M’Zab, Le Corbusier’s Aircraft shows both a new enlarged conception of urban planning and the discovery of what lies outside it, the desert. The captivating aspect is that Le Corbusier’s journey introduced him into the history of the aviators that, along the inter-war period, got trapped by the aerial view of the deserts of North-Africa.

mapping the desert

By the time of Aircraft, the airplane was coming to be an autochthonous species of the Northern African coast after migrating during WWI. Throughout the inter-war period the new resettled bird changed the dropping of bombs for the shooting of pictures. In the pilot’s rear cockpit the machine guns were dismantled and long-foci cameras were installed. Within the new geopolitical condition aerial reconnaissance played an strategic role for the European powers in influencing the unstable colonies. Within the drawn cartographic limits, large areas of unmapped territories constituted a terra nullius of a sort. In the Sahara desert undisclosed voids populated the charts, mainly in its central part –the (so far) impenetrable Libyan desert. Tracks traced by camel along the centuries were pushed forward at the beginning of the twentieth by the entry of modified cars Ford models T and A. However, the aerial device did not only provide hours of autonomy, but an altogether different conscience of the object being mapped. Ardito Desio, cartographer well-acquainted with the experiences of the desert from camel and car, argued that the airplane revealed “the skeleton of Mother Earth”⁷. And similarly, “the airplane has unveiled for us the true face of the earth”, was pointed by Saint-Exupéry. Being the face or its skeleton, the new point of view disclosed a different subject of vision, the body of an anthropomorphised Earth. However, if Le Corbusier praised the legibility of the perpendicular vision, what other aviators discovered was not graspable abstraction but rather an fluctuating subject whose face was in a state between disfiguration and transfiguration.

That struggle between unstable territory and scientific logic was present in the topographical research of Ralph Bagnold, trying to make the desert into a laboratory for his studies in *The Physics of Blown Sand and Desert Dunes* (1933). Collaborating frequently with the Geological Survey of Egypt, Bagnold was one of the main characters in tracing the border between Egypt and Libya that until then was a straight line crossing uncharted territories. His expeditions were widely published in the Journal of the Royal Geographical Society⁸. But for him, the desert had as much of science as of fiction:

“(...) I had been excited by H.G. Wells’s romances in science fiction (...). They stimulated me with the idea that there were new, unimagined things still to be discovered. (...) The geographical explorations that I organised in Egypt and Sudan were a first consequence. There might be something previously unknown just over the next horizon, not only in the geographical sense but much more generally”⁹.

Even carrying the high-technological tools that endowed them with territorial appropriation, the desert cartographers in the interwar period were moving in the ambiguous edge of science/fiction. His first article, *Journeys in the Libyan Desert 1929 and 1930*¹⁰, develops a diary of the expedition. Its language is clear, precise; the descriptions

meticulous however in a crude language. However, amid that scientific language of cartographic precision, the last section opens: "(a) s regards Zerzura, a certain amount of negative evidence has been acquired"¹¹. The mentioned Zerzura, mythical forgotten oasis, became a popular legend after the years since the publication in the *National Geographic Magazine* (Sept, 1924) of Hassanein Bey's pioneer journey through the Libyan desert. A debate called "the Zerzura problem"¹² was generated in the journals. The city first appeared in the fifteenth-century treasure-hunters guide *Kitab al-Kanuz* described as 'a city white as a dove.' The text comments on the great treasures contained and the way to accessing them¹³. The debate around a forgotten city helped the Geological Survey tracking routes through the desert. Along Bagnold, aviator László Almásy was the other protagonist in the search of the lost oasis. Both organised several expeditions along the 1930s. In 1932, from a Gipsy I Moth¹⁴, H.W.G.J. Penderel –member of Almásy's expedition– overflew an unknown depression in the Libyan desert. Almásy claimed the discovery of Zerzura. Bagnold negated it, arguing that "as long as any part of the world remains uninhabited, Zerzura will be there, still to be discovered"¹⁵. First baptised by the winged-eye as Zerzura, the plateau was not accessed until years later due to the lack of tracks through the steep cliffs. Therefore, Penderel's photograph (f2) played a key role not that much in its cartographic function but in the dissemination of the legend. Found or forgotten, Zerzura operated as a driving force to disclose horizons, however a fictional element it was. "A vanishing point"¹⁶, as Peter Clayton –pilot in Penderel's flight– put in his biography, it was meant not only in the horizon of their journeys but also as a missing point with which the aerial photographs stopped being a cartographic device and became a dis-locating one.



f2_The Gilf Kebir [Zerzura]
1932, HWGJ Penderel
Royal Geographical Society 239856

Along with the geographical research, Almásy, Bagnold and many of their companions published their memoirs of the desert. These follow more the tradition of nineteenth century literary exoticism in the desert rather than the highly academic standard of scientific journals. In the same year, 1935, Bagnold published his *Libyan Sands*¹⁷ and Almásy his *Az ismeretlen Szahara*¹⁸ [Unknown Sahara]. They narrate the experiences of the untrammelled movement in the landscape towards areas of seducing blankness in the maps, as Bagnold writes¹⁹. Paradoxically in their fashion of colonisers bringing modernisation, their texts praise the qualities of living outside society. "We were free again to go anywhere we pleased (...) with that happy

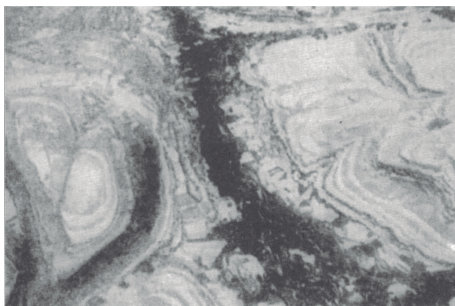
the rise of phaethon. an aerial travelogue to north-africa in the inter-war period

sense of being the only things alive"²⁰. The airplane endowed the pilot to move off the tracks, both in literal and sociological sense. In their narratives, the search for Zerzura was not as much about pushing civilisation further as about a search for experiencing the condition of being outside it. Sir Percy Cox, president of the Royal Geographical Society, pointed that, along with the "humiliating blank in the map", the Libyan desert attracted cartographers because of "an air of mystery about it"²¹. It was precisely that 'air' the aircraft was cutting through; the aviator inhabiting it as in a sort of Arabian-Nights magic carpet ride. Almàsy became a popular figure when Michael Ondaatje made him the protagonist of his novel *The English Patient* (1992). In the novel, Almàsy appears as the figure that embodies that narrative of the desert after suffering an airplane crash in the Sahara. "Burnt beyond recognition, Almàsy represents the art of disappearing to an extreme. He becomes a part of the desert even in his death"²². Their books were not about charting the desert, on the contrary, they were about erasing it, disappearing flying below radar.

editing the desert

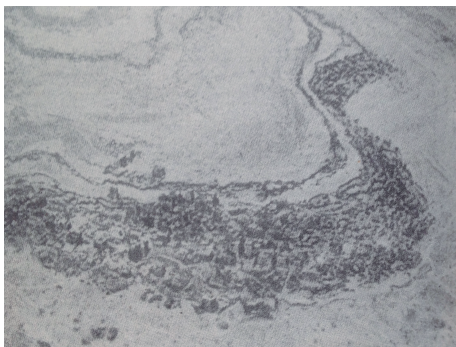
From Paris, writer Andre Malraux also set a flying adventure to another legendary city: the capital of the Queen of Sheba. However, if the cartographers of Zerzura were filling voids of untraced maps, Malraux's was an exercise of 'editing' already explored lands. "The Queen of Sheba is known only by two sources: the Bible and the Koran. Therefore, only gods have written about her"²³. Whether considering deity or not, Malraux intended at least to emulate the divine gaze, overflying the forgotten capital. As he retraced in his *Antimemoirs* (1967), Malraux's adventure was inspired by the rumours regarding Arnaud, the first European to wander territories in search of Sheba. The predecessor ventured the Arabian Peninsula in disguise as candle-merchant where eventually found the ruins. After a perilous journey back in which he lost his sight, he finally reached Jedda where he was asked by the consul to draw up a plan of the remnants. His sightless hand was only capable of producing meaningless patterns on the paper. Arnaud then took the consul to the beach where, lying on the wet sand, his hands crafted a miniature of the ruins the consul quickly copied to his notebook before being erased by the sea²⁴. On the 22th of February, 1934, financed by the newspaper *L'Intransigent*, the French writer along with pilot Corniglion-Molinier departed from France on board of a Farman 190. The aim was to reach the northern limit of the desert of Yemen, where the documents kept in the Geographical Society of France pointed the capital would be. In their narration, it becomes drastic that "the different relevant landmarks in each of the maps of Arabia do not match"²⁵, as that dis-locations of the charts opened room for legendary cities to emerge. In the air, the ground below became blurred and several times they got lost. However, in the midst of their mis-directions, Sheba eventually appeared as "vast white stain"²⁶. When back in Djubouti, a telegram was received in France: "Discovered the legendary capital of the queen of Sheba stop twenty towers or temples standing stop in the northern border of Rub'Al-Khali stop pictures taken for L'Intransigent stop"²⁷. It was that last statement that became geographical and fictionally crucial. Over movements around the ruins, Corniglion searched for a landing ground, though the dunes didn't allow enough space. The travelogue was published as a series of ten articles entitled *Au-dessus du desert d'Arabie*²⁸ in the main page of *L'Intransigent* along 1934. Therefore, only the aerial photographs were the proof of their finding. Back in France, they became the centre of the polemic. The three published photographs (f3, f4 and f5) show an oblique vision of the territory in which the soft curvature of the ground draws subtle hues of grey, barely defining the forms of buildings over the white background. Serious doubts about the discovery were risen on the fact that some were clearly 'edited'²⁹. However, for Malraux the question was not on 'discovery' as geographical location in the map. The way the photographs work is precisely the edition of what mapping could be. In the famous photographs of Malraux preparing his edition for *Le musée imaginaire* (1947)³⁰, the writer is shown surrounded by photographic reproductions of works of art. Both the

point of view of the cameraman and the position of Malraux extend the vision over Sheba. The 'aerial' view above the field of reproductions produces a collapse of time that suppresses notions of progress in the History of Art and allows the art critic a wreckage of space into a 'museum without walls'[term with which musée imaginaire was translated into English]. However, in the case of Sheba, the imaginaire aspect is literally applied to a legend and the aerial view scales the musée into a cité imaginaire. As the spread of objects d'art through their reproduction produces a shifting field over which the art historian operates, aerial photography produces the possibility of a process of edition over existing maps. The aerial pictures of Sheba open up the possibility of cartography understood as production of dis-locating territories. Malraux finally becomes a modern Arnauld. The blindness of the adventurer shifts the object of vision which is translated through the work of his hands, proving what Lewis Carroll once observed, "they say that we Photographers are a blind race at best.". Aerial photography over the desert changes the logic of adventure, operating more as 'covering' than 'discovering'.



f3_Aerial Shot of the Valley of the Tombs

1934, from André Malraux, Andre Malraux, *La Reine de Saba, Une Aventure Géographique*

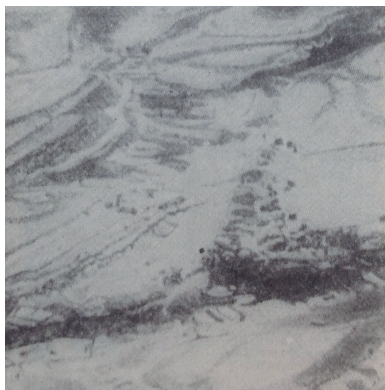


f4_The Vast Extension of the City

1934, from André Malraux, Andre Malraux, *La Reine de Saba, Une Aventure Géographique*

the rise of phaethon. an aerial travelogue to north-africa in the inter-war period

In his mémoires, Malraux revisits the episode wondering “how did I take it into my head (...) to search for the Queen of Sheba’s capital?”³¹ At that time the figure of the adventurer in “forgiven worlds” generated a “mixture of curiosity and amusement”. Through-out his life, Malraux was fascinated with probably the most iconological figure of the Westerner in the desert after the Great War: Lawrence of Arabia. “The legend of Lawrence (...) is the dazzling legend of a Queen of Sheba army”³². However, overall since the publication of his *Seven Pillars of Wisdom* (1922), Lawrence represents the journey through the desert as a quest for illumination –a struggle that Malraux review in Lawrence and the Demon of the Absolute³³. In Lawrence’s discourse “the desert inhibits considered judgements (...). Men in it speak out their minds (...). Words in the desert are clear-cut”³⁴. However, if by camel or bare feet the desert loner ponders words deep and sharp, the photographic experience translates them into blindness. The photographic transcription of their experience moves in a tension between illumination and glare, visibility and blindness. Bagnold pointed how in the desert “with no landmarks about it is a little difficult to accustom oneself to the fact that one really is at any particular place”³⁵. In that status, the machinery of both camera and aircraft challenge the logic of high-technology that produced them.



f5_Towards the Valley of the Tombs

1934, from André Malraux, *André Malraux, La Reine de Saba, Une Aventure Géographique*

conclusion

Aerial photography of the desert in the Interwar period challenged the mythology of Icarus associated to the god-eyed airplane view. If the aircraft was traditionally associated with endowment of visibility, empowerment, legibility and surveillance, the photographs of these aviators were not looking for an endue of control but rather for its lost. Early applied to the apparatus of cartography, the airplane was instrumental in charting the voids in the map. However, the map-making of the North African desert placed them in an alien landscape disconnected from civilisation. The desires of drawing lines that connected them back to Cairo or Paris were also accompanied by a quest of moving unplugged. David Lean’s 1962 film follows the opening scene of Lawrence of Arabia’s motorcycle crash, with a flashback to the underground map room of the British headquarters in Cairo. “This is a nasty, dark, little room....we are not happy in it” remarks Peter O’Toole in his Oxford manner. Annoyed

by the task of map drawing indoors, a note arrives commanding him to speak to the colonel immediately. Responding to his colonel's complaints about the inability of Lawrence to fulfil his task, he quotes Themistocles "I cannot fiddle, but I can make a great state from a little city", a dispute with the commander that eventually takes Lawrence to the Arabian desert. To the science of cartography as drawing traces in the chart, it is counterposed the experience of the desert wayfarer. Finally, map-making becomes the unfolding of the character rather than geographical replication. In the quest for Zerkura or Sheba, the aerial photographs of Penderel or Malraux re-defined map-making. Their aerial shots did not understand the map as a device for locating oneself, quite the opposite, they were aiming at getting lost. The experience of high-altitude flights inhabiting the rear cockpit was translated into photography not as legible figurative reproduction of the face of mother earth, but into abstract patterns of sun light reflected in the sand captured by the sensitive plate. If Le Corbusier also unfold his voice in the persona of Icarus as a prototypical understanding architect's view from above, in their case of the winged-eye view of the airplane did not reenact an Icarian mastery. Instead, their photographs arose the myth of Phaethon, whose lost of control over the sun chariot of Apollo, his father, brought the celestial body closer to the earth, changing much of Africa into a desert-scape.

endnotes

1. Le Corbusier, *Aircraft*. (London: The Studio Publications Inc, 1935), 8.
2. Daedalus, father of Icarus, is also said to be the architect of the labyrinth in Knossos. For an argument about the origins of architecture in Daedalus' labyrinth see Indra Kagis McEwen *Socrates' Ancestor: an essay on architectural beginnings* (London: MIT Press, 1993).
3. Le Corbusier, *Aircraft*, 5. He prefaces the title of the book with "L'avion accuse...". (3) and states that "advised moreover by my friend the poet Pierre Guéguen (...) I have added my own title "The airplane indicts". (5).
4. Adnan Morshed. "The Cultural Politics of Aerial Vision: Le Corbusier in Brazil (1929)", *Journal of Architectural Education* Vol. 55, No. 4 (May 2002): 207.
5. Adnan Morshed. "The Cultural Politics of Aerial Vision: Le Corbusier in Brazil (1929)", *ibidem*, 206.
6. Le Corbusier, *Aircraft*, 12-13.
7. Ardito Desio. *Le Vie della Sete* (Milano: Ulrico Hoepli, 1950), 246.
8. Bagnold published 15 articles in the journal between 1931 and 1939.
9. Ralph A. Bagnold. *Sand, Wind, and War* (Tucson: The University of Arizona Press, 1990), 103.
10. Ralph A. Bagnold. "Journeys in the Libyan Desert 1929 and 1930", *The Geographical Journal*. Vol.78, No.1 (Jul, 1931), 13-33.
11. Bagnold. "Journeys", 33.
12. An explanation of "the Zerkura problem" was written by N. B. De Lancey Forth even before Bagnold's article. De Lancey Forth. "More Journeys in Search of Zerkura". *The Geographical Journal*, Vol.75, No.1 (Jan, 1930) 48-59.
13. cf. Richard A. Bermann. "Historic Problems of the Libyan Desert". *The Geographical Journal*, Vol.83, N.6 (Jun, 1934), 456-457.
14. cf. F. J. R. R. "A Reconnaissance of the Gifl Kebir by the Late Sir Robert Clayton East Clayton". *The Geographical Journal*, Vol.81, No.3 (Mar, 1933), 249.
15. Ralph A. Bagnold. *Libyan Sands: Travels in a Dead World* (London: Haag, 1987 reprint of 1935 ed.)
16. Peter Clayton. *Desert Explorer. A Biography of Colonel P.A. Clayton. 1896 to 1962*. (Cargreen, Cornwall: Zerkura Press, 1998), 42.
17. Bagnold, *Libyan Sands*.
18. László Almásy. *Az ismeretlen Szahara* (Budapest: Franklin, 1935).
19. Bagnold, *Libyan Sands*, 255.

the rise of phaethon. an aerial travelogue to north-africa in the inter-war period

20. Ibid, 260.

21. Richard A. Bermann. "Historic Problems of the Libyan Desert: Discussion". *The Geographical Journal*, Vol. 83, N. 6 (Jun, 1934), 464.

22. Karen Pipeer. *Cartographic Fictions* (New Brunswick, NJ: Rutgers University Press, 2002), 104.

23. André Malraux. *La Reina de Saba. Una Aventura Geográfica* (Barcelona: Ediciones Península, 2011), 102.

24. cf. Malraux, André. *Antimemoirs*, Translated by Terence Kilmartin (London: Hamish Hamilton, 1968), 57-58.

25. Edouard Corniglion-Molinier. "La Naissance d'un raid". *L'Intransigeant*, May 5 1934, 1.

26. Malraux. *La Reina*, 87.

27. *L'Intransigeant*, March 8 1934.

28. Cf. André Chastel. "La légende de la Reine de Saba". *Revue de l'histoire des religions* 119 (1939): 216.

29. Cf. Ignacio Echevarria. "Prólogo" in *Malraux, La Reina*, 17.

30. Cf. Mark Campbell. "Blood Simple". *AA Files*, 66 (2013): 155.

31. Malraux. *Antimemoirs*, 54.

32. Ibid., 272.

33. André Malraux. "Lawrence and the Demon of the Absolute". *The Hudson Review*, vol. 8. no. 4 (Winter, 1956): 519-532.

34. T.E. Lawrence. "Introduction" in *Travels in Arabia Deserta*. *Charles Montagu Doughty* (London: Jonathan Cape, 1936), 20.

35. Bagnold, *Libyan Sands*, 90.

bibliography

_Le Corbusier. *Aircraft*. London: The Studio Publications Inc, 1935.

_Morshed, Adnan. "The Cultural Politics of Aerial Vision: Le Corbusier in Brazil (1929)". *Journal of Architectural Education* Vol. 55, No. 4 (May 2002): 206-207.

_Saint-Exupéry, Antoine de. *Wind, Sand and Stars*. New York: Reynal & Hitchcock, 1939.

_Bagnold, Ralph A. *Libyan Sands*. London: Hodder and Stoughton, 1935.

_Bagnold, Ralph A. *Sand, Wind, and War*. Tucson: The University of Arizona Press, 1990.

_Kelly, Saul. *The Hunt for Zerzura, the Lost Oasis and the Desert War*. London: John Murray, 2002.

_Malraux, André. *Antimemoirs*, Translated by Terence Kilmartin. London: Hamish Hamilton, 1968.

_Malraux, André. *La Reina de Saba. Una Aventura Geográfica*. Barcelona: Ediciones Península, 2011.

_Pipeer, Karen. *Cartographic Fictions*. New Brunswick, NJ: Rutgers University Press, 2002.

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